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FLOWTHROUGH ACID HYDROLYSIS OF RAPESEED STALKS

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Abstract

The pentosans acid hydrolysis of flowthrough system of rapeseed (*Brassica napus*) stalks at lab level in the presence of dilute sulfuric acid 0.5% was studied. The temperature and reaction time influence the elimination hemicelluloses and formation sugars (xylose, glucose and arabinose in hydrolysates) and formation of by products (furfural, HMF, acetic acid, formic acid, etc.). We followed the variation of pH, the yields in total sugars, concentration in total solids fraction in the hydrolysates after hydrolysis. Also, the hydrolysates obtained were characterized by HPLC, FTIR, UV-VIS and fluorescence spectroscopy. According to the experimental data a hydrolysis at 160°C for 150 min results of the maximum yield in sugars 20.9% reported at oven dried material.

Key words: dilute acid hydrolysis, flowthrough system, rapeseed stalks

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